

SEQUENCE LISTING

<110> Gestion Univalor

BRISSON, Normand

DESVEAUX, Darrell

SUBRAMANIAM, Raiagopal

SYGUSCH, Jurgen

<120> PLANT TRANSCRIPTIONAL ACTIVATOR AND USES
THEREOF

<130> 10662-121PCT

<150> US 60/479,871

<151> 2003-06-20

<160> 4

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 274

<212> PRT

<213> Artificial Sequence

<220>

<223> potato StWhyl protein sequence

<400> 1

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Asn | Phe | Ser | Leu | Ser | Pro | Ser | Pro | Thr | Ser | Gly | Phe | Ser | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asn | Leu | Gln | Asn | Pro | Thr | Lys | Thr | Ser | Tyr | Leu | Ser | Phe | Ser | Ser | Ser |
| | | 20 | | | | | | 25 | | | | | | 30 | |
| Ile | Asn | Thr | Ile | Phe | Ala | Pro | Leu | Ser | Ser | Asn | Thr | Thr | Lys | Ser | Phe |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Gly | Leu | Thr | His | Lys | Ala | Ala | Leu | Pro | Arg | Asn | Leu | Ser | Leu | Thr |
| | | 50 | | | | | 55 | | | | | 60 | | | |
| Cys | Arg | His | Ser | Asp | Tyr | Phe | Glu | Pro | Gln | Gln | Gln | Gln | Gln | Gln | Gln |

<211> 263

.<212> PRT

<213> Artificial Sequence

<220>

<223> Arabidopsis Whirly proteins AtWhy1

<400> 2

Met Ser Gln Leu Leu Ser Thr Pro Leu Met Ala Val Asn Ser Asn Pro

3/6

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1           5           10           15
Arg Phe Leu Ser Ser Ser Ser Val Leu Val Thr Gly Gly Phe Ala Val
      20           25           30
Lys Arg His Gly Phe Ala Leu Lys Pro Thr Thr Lys Thr Val Lys Leu
      35           40           45
Phe Ser Val Lys Ser Arg Gln Thr Asp Tyr Phe Glu Lys Gln Arg Phe
      50           55           60
Gly Asp Ser Ser Ser Ser Pro Ser Pro Ala Glu Gly Leu Pro Ala Arg
      65           70           75           80
Phe Tyr Val Gly His Ser Ile Tyr Lys Gly Lys Ala Ala Leu Thr Val
      85           90           95
Asp Pro Arg Ala Pro Glu Phe Val Ala Leu Asp Ser Gly Ala Phe Lys
      100          105          110
Leu Ser Lys Asp Gly Phe Leu Leu Leu Gln Phe Ala Pro Ser Ala Gly
      115          120          125
Val Arg Gln Tyr Asp Trp Ser Lys Lys Gln Val Phe Ser Leu Ser Val
      130          135          140
Thr Glu Ile Gly Thr Leu Val Ser Leu Gly Pro Arg Glu Ser Cys Glu
      145          150          155          160
Phe Phe His Asp Pro Phe Lys Gly Lys Ser Asp Glu Gly Lys Val Arg
      165          170          175
Lys Val Leu Lys Val Glu Pro Leu Pro Asp Gly Ser Gly His Phe Phe
      180          185          190
Asn Leu Ser Val Gln Asn Lys Leu Val Asn Val Asp Glu Ser Ile Tyr
      195          200          205
Ile Pro Ile Thr Arg Ala Glu Phe Ala Val Leu Ile Ser Ala Phe Asn
      210          215          220
Phe Val Leu Pro Tyr Leu Ile Gly Trp His Ala Phe Ala Asn Ser Ile
      225          230          235          240
Lys Pro Glu Glu Thr Ser Arg Val Asn Asn Ala Ser Pro Asn Tyr Gly
      245          250          255
Gly Asp Tyr Glu Trp Asn Arg
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<210> 3

<211> 237

<212> PRT

<213> Artificial Sequence

<220>

<223> Arabidopsis Whirly proteins AtWhy2

<400> 3

Met Lys Gln Ala Arg Ser Leu Leu Ser Arg Ser Leu Cys Asp Gln Ser
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Lys Ser Leu Phe Glu Ala Ser Thr Leu Arg Gly Phe Ala Ser Trp Ser
20 25 30
Asn Ser Ser Thr Pro Gly Arg Gly Phe Pro Gly Lys Asp Ala Ala Lys
35 40 45
Pro Ser Gly Arg Leu Phe Ala Pro Tyr Ser Ile Phe Lys Gly Lys Ala
50 55 60
Ala Leu Ser Val Glu Pro Val Leu Pro Ser Phe Thr Glu Ile Asp Ser
65 70 75 80
Gly Asn Leu Arg Ile Asp Arg Arg Gly Ser Leu Met Met Thr Phe Met
85 90 95
Pro Ala Ile Gly Glu Arg Lys Tyr Asp Trp Glu Lys Lys Gln Lys Phe
100 105 110
Ala Leu Ser Pro Thr Glu Val Gly Ser Leu Ile Ser Met Gly Ser Lys
115 120 125
Asp Ser Ser Glu Phe Phe His Asp Pro Ser Met Lys Ser Ser Asn Ala
130 135 140
Gly Gln Val Arg Lys Ser Leu Ser Val Lys Pro His Ala Asp Gly Ser
145 150 155 160
Gly Tyr Phe Ile Ser Leu Ser Val Asn Asn Ser Ile Leu Lys Thr Asn
165 170 175
Asp Tyr Phe Val Val Pro Val Thr Lys Ala Glu Phe Ala Val Met Lys
180 185 190
Thr Ala Phe Ser Phe Ala Leu Pro His Ile Met Gly Trp Asn Arg Leu
195 200 205
Thr Gly His Val Asn Thr Glu Ala Leu Pro Ser Arg Asn Val Ser His
210 215 220
Leu Lys Thr Glu Pro Gln Leu Glu Leu Glu Trp Asp Lys
225 230 235

<210> 4

<211> 267

<212> PRT

<213> Artificial Sequence

<220>

<223> Arabidopsis Whirly proteins AtWhy3

<400> 4

Met Ser Gln Leu Leu Ser Ser Pro Pro Met Ala Val Phe Ser Lys Thr
 1 5 10 15
 Phe Ile Asn His Lys Phe Ser Asp Ala Arg Phe Leu Ser Ser His Ser
 20 25 30
 Ile Leu Thr Ser Gly Gly Phe Ala Gly Lys Ile Ile Pro Leu Lys Pro
 35 40 45
 Thr Ala Arg Leu Lys Leu Thr Val Lys Ser Arg Gln Ser Asp Tyr Phe
 50 55 60
 Glu Lys Gln Arg Phe Gly Asp Ser Ser Ser Ser Gln Asn Ala Glu Val
 65 70 75 80
 Ser Ser Pro Arg Phe Tyr Val Gly His Ser Ile Tyr Lys Gly Lys Ala
 85 90 95
 Ala Leu Thr Ile Glu Pro Arg Ala Pro Glu Phe Val Ala Leu Glu Ser
 100 105 110
 Gly Ala Phe Lys Leu Thr Lys Glu Gly Phe Leu Leu Leu Gln Phe Ala
 115 120 125
 Pro Ala Ala Gly Val Arg Gln Tyr Asp Trp Ser Arg Lys Gln Val Phe
 130 135 140
 Ser Leu Ser Val Thr Glu Ile Gly Asn Leu Val Ser Leu Gly Pro Arg
 145 150 155 160
 Glu Ser Cys Glu Phe Phe His Asp Pro Phe Lys Gly Lys Gly Asp Glu
 165 170 175
 Gly Lys Val Arg Lys Val Leu Lys Val Glu Pro Leu Pro Asp Gly Ser
 180 185 190
 Gly Arg Phe Phe Asn Leu Ser Val Gln Asn Lys Leu Leu Asn Val Asp
 195 200 205
 Glu Ser Val Tyr Ile Pro Ile Thr Lys Ala Glu Phe Ala Val Leu Ile
 210 215 220
 Ser Ala Phe Asn Phe Val Leu Pro His Leu Ile Gly Trp Ser Ala Phe
 225 230 235 240
 Ala Asn Ser Ile Lys Pro Glu Asp Ser Asn Arg Leu Asn Asn Ala Ser

245 250 255
Pro Lys Tyr Gly Gly Asp Tyr Glu Trp Ser Arg
260 265